OIPE JC174
JAN 27 2003
PATENT & TRADEMARK OFFICE

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SUBSTITUTE SPECIFICATION OF:
Serial No.: 09/985,961
Filed: November 5, 2001
Inventor: Pablo Casanova and Ramon-Borja

Title: TILE SIMULATING FOUR TILES WITH A RECTICULATED MESH SUPPORT AND FREE ASSEMBLY

Sub Spec A

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RELATED APPLICATION:

This is a continuation of International Application No. PCT/ES01/00082, filed March 5, 2001.

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FIELD OF THE INVENTION:

This invention relates to a roof tile that simulates four tiles with a reticulated mesh support and free assembly whereby placement of one unit has the effect of placing four single tiles.

BACKGROUND OF THE INVENTION:

Roof tiles composed of glazed and unglazed fired clay were used in ancient Greece and Rome. Red and orange clay roof tile continues to be widely used in Southern Europe. Two common systems for the roof tiles comprises an underlayer of concave tiles covered at the joint by an outer layer of convex tiles, and overlapping S-shaped tiles.

SUMMARY OF THE INVENTION:

The effect achieved in the invention is that of two ridge tiles and two channel tiles, all adjacent to each other are combined into a single tile unit. The channel tiles are concave shaped on the upper face although the bottom face support is flat and mesh-shaped.

Although advantages of this invention may be appreciated from the following description, they include, without any limitation the following, related in particular to the support provided in the shape of reticulate mesh.

Ventilation of the bottom face on the tile on the roof is facilitated while leaving some airtight compartments in the shape of air chambers. Good ventilation is necessary in ceramic material. Dampness and condensations are avoided and better quality and durability is achieved in the covering, both in the support and tiles.

The air chamber so provided contributes to better thermal and acoustic insulation.

The horizontal support which is provided gives better stability for its placement on the roof.

Greater adherence to the support, facilitates the fastening of the tiles.

The mesh support facilitates manufacturing the tiles in series, given that it improves the airing of the tiles in both the drying room and the kiln.

Because of the horizontal support, this tile can be manufactured in the same tray as standard tiles.

The support is reinforced with ribs, which provide greater rigidity, resistance to flexopressure compression and impact. Free assembly allows for the following advantages:

Greater speed and velocity of placement.

The possibility of laying the tiles on the roofs in shifting squares or circularly.

Dry finishing at the roof (without mortar).

BRIEF DESCRIPTION OF THE DRAWINGS:

For a better understanding of the invention the following drawings are included, which serve as a non-limiting example of the invention, in which:

Figure 1 is a perspective view of the top face of the tile;

Figure 2 is a plan view of the top face of the tile;

Figure 3 is an elevated plan view of a cover wherein a plurality of tiles has been assembled;

Figure 4 is a view of the bottom face of the tile in relief;

Figure 5 is a side section view of the tile;

Figure 6 is the side section of an assembled tile;

Figure 7 is a respective view of the tile as it is being manufactured in a tray; and

Figure 8 is a view of tiles in a circular cover.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS:

In accordance with this invention, the tile consists of two semi-cylindrical areas 1 and 2 which are convexed superimposed, and longitudinally adjacent with channeled concave areas 3 and 4 which are superimposed as well. The latter have a flat bottom support 5. The front edge 6 of the tile has a protruding peripheral 7 step. In the rear, the tile has convex 8 and concave 9 channeled zones slightly lower in height with respect to the rest of the tile with a posterior peripheral ridge 10 that ends in a longitudinal edge 11. At the height that simulates the superimposition the tiles it has an undercutting or descending step 12.

In the middle of the width of this posterior undercutting 8, there is another step 13 similar in height and parallel to the peripheral one. The former has a channel 14 in the center of the concave area 9.

At the same time, on the inside of the peripheral longitudinal step 11 there is another step 15 with a trapezoidal section with an appropriate length of two-thirds of the adjacent concave area length.

Next to it there is a channel 16 with a slight transversal protrusion 17.

There is another longitudinal protrusion 18 with a trapezoidal section of shorter length which reaches the zone that simulates the superimposition of the tiles where the peripheral edge presents a descending step 12 which has been previously mentioned. Inside there is another step 18' similar to those previously described, and of a greater height at the peripheral edge, thus creating a slight oblique transversal rim 19.

The front part of this flat zone is divided longitudinally by the channel 20 and the most outer part is composed of three oblique steps 21 which are parallel to each other.

~~Front edge 7 occupies the entire front parameter and the longitudinal side of the tile.~~

On the bottom face, the concave area as well as the flat periphery have lugs with a trapezoidal section which serves as a support on the cover.

Figure 4 shows a bottom view with peripheral reliefs R of the flat areas 8, 1' and 2', which corresponds to the bottom face of the convex areas that serve as support to the latter.

The areas which on the top face are concave and flat form a mesh with supports in the peripheral ribs A and rectangular spaces 22 determined by the above-mentioned ribs which allow the support of the edges and the ribs that protrude as well as for the creation of air chambers which improve the ventilation and avoid dampness.

Although I have disclosed the preferred embodiments of my invention, it is to be understood that it is capable of other adaptations and modifications within the scope of the following claims: